

Aviation News

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First Federal-aid Airport Program Becomes Official: President Truman last week signed the long-awaited Federal act which will touch off a seven-year, billion-dollar landing field development program. Looking on are: Sen. Pat McCarran (D-Nev.), co-sponsor; with Rep. Jennings Randolph (D-W. Va.), longtime Congressional exponent of airport aid; Gael Sullivan, second assistant Postmaster General; Rep. Alfred L. Bulwinkle (D-N. C.), member of the House Interstate and Foreign Commerce Committee and a leading figure in enactment of the bill; William A. M. Burden, assistant secretary of Commerce for air; T. P. Wright, Administrator of Civil Aeronautics; Charles B. Donaldson, assistant CAA administrator for airports. Leaning over desk is CAB Chairman L. Welch Pogue. (See Page 7.)

Engineers Back Proposals for Supersonic Research

AIA polls executives for reaction to multi-million-dollar wind tunnel plan.....Page 19

CAB Atlantic Rate Veto Poses Problem for Carriers

IATA tariffs scored as Board demands lower and economically sound fares.....Page 27

Kidde Engineered Systems fire-protect *TODAY'S* planes and anticipate *TOMORROW'S*

2 ENGINES

4 ENGINES

6 ENGINES

8 ENGINES

200 MPH

300 MPH

370 MPH

SUPERSONIC

JET PROPULSION?

2,000 HP

3,500 HP

6,000 HP?

HIGHER SPEED, larger engines and more of them per plane. That means new problems in fire protection!

Kidde engineered extinguishing systems—planned for the plane—keep constantly in step with these new requirements. On many of the faster, larger planes that have already taken to the air, Kidde systems are helping to establish high standards of fire safety. For revolutionary designs still on the drawing boards, Kidde engineers are prepared to develop equally effective, reliable extinguishing systems.

Aircraft manufacturers and transport companies are invited to discuss their fire protection problems with Kidde.

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THE AVIATION NEWS

Washington Observer



AIRPORT ACT WEAKNESS—It is being predicted that one of the major weaknesses in the airport act (See Page 7) that CAA will discover as the program goes under way is lack of the provision in the original Senate bill which would have made mandatory establishment of state airport commissions. All of the Federal-aid highway laws have in effect required creation of state road commissions which have been valuable in setting up and maintaining standards of construction and repair. This has simplified the job of Public Road Administration. Neither CAA, nor the industry, however, have any present inclination to accept a Congressional fight by asking for amendments to the airport act.

BIG BU-AER—There is a strong likelihood that Army and Navy fiscal 1947 budgets could enable the Navy's air arm to become larger than the postwar AAF. Bureau of Aeronautics requested \$1,100,000,000, or almost \$50,000,000 more than the Air Corps' budget. Although Navy inside, and the Budget Bureau, paid Baker's figures down to \$870,000,000, Navy inside in the House are tightening lines to restrict Baker's cuts when the bill reaches the floor.

NEW RECORDS—Army Air Force is preparing to harvest a new crop of air records. The last record-breaking stunt was conducted on the Air Corps' 36th birthday, August 1939, at Wright Field, where five international records and several new national marks were set. Wright Field again will be the headquarters of the new record attempt, due probably next week.

CAB IN THE MIDDLE—Civil Aeronautics Board is deeply concerned about the 500-odd one-scheduled air transport operations which have sprung up, and considers the developments bad primarily because it feels most of the operators will founder financially. Its members say they have been squawking in the middle on this controversial matter laden with dynamite. They are convinced that they had no authority to take preventive action in advance, and that they would have been bitterly criticized by the operators, public, and Congress if they had sought to hold down such development. On the other hand, if a series of fatal accidents by these unscheduled carriers had developed, the Board would probably have been condemned for not having taken proper steps to "protect the public." CAB members will be relieved when this new industry's federal safety regulations are effective Aug. 1.

P.O. SPURS HELICOPTER IDEAS—Interest caused by Post Office Department in use of helicopters to round up air mail in a given area, coupled with

passage of the airport bill, has brought heavy mail from cities hopeful of becoming the center of special routes. New helicopter courier lines are popping up (on paper) everywhere. Meanwhile, CAA has unanimously set just 10 for hearings on helicopter service in the Los Angeles area.

PENETRATION TO MOSCOW—Top government observers believe it may take four or five years for the U. S. to get an airline into Leningrad, and even longer for Moscow service. Under present conditions, those officials say, it may be 10 to 15 years before any U. S. airline will be able to operate across Russia to China and to other points in Russia. But this is not because most Russian officials are adverse to U. S. penetration. Generally, officials below Stalin are strongly in favor of banking through the iron curtain, not only to permit technical interchange, but to expand Russian lines worldwide. It is truly comical in official Washington that with removal or death of Stalin, the curtain could be pierced immediately.

RESPECT FOR POGUE—There have been few, if any other, top Federal aviation officials in history who have won and held the respect of the industry so well as I. Wicks Pogue, who will retire as CAB chairman sometime after June 15, following the Canadian conference. The airlines' respect for him has work brought out the largest gathering of aviation's leaders that Washington has seen in years.

ANTIDOTE TO RETRANSPORTATION ASSN.—Frequent suggestions in aviation that a new group be organized to counter the smoothly-oiled and potent Transportation Association of America, controlled by the railroads, are being heard again, and a preliminary meeting of officials of the airlines, pipe lines, trucks, and other carriers was held last week to discuss strategy of a campaign to combat the TAA's transportation integration program.

PRIVATE FLYING SPECIALISTS—Fixed base operators are urging that top CAA officials in Washington venture out of the halls of the Commerce Building and set foot on some good airports, the middle the better, to get acquainted with "the little fellows" who are making a living despite foreseeable problems. The Administration recently was asked how many of the CAA staff had flown in anything smaller than a twin-engine Beech, including the newly appointed regional private flying specialists who travel in Beeches, Cessnas, and Fairchild, from one big airport to another. Sky-five home Grathoppers were recommended for these specialists.

WASP MAJORS

for the Stratocruisers



With scores of passengers traveling at high speeds in luxurious comfort, Boeing's new Stratocruiser will take to the air with power—lots of power—fourteen thousand horsepower.

This power will be supplied by four Pratt & Whitney Wasp Majors—the most powerful aircraft engines in production in the world.

PRATT & WHITNEY AIRCRAFT
EAST HARTFORD, CONNECTICUT
ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

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Signing of Federal Airport Act Paves Way for Building Program

First of \$1,000,000,000 construction work planned for early 1947; funds over U. S. funds is expected to be consumed by urban and rural interests before CAA.

By WILLIAM KROGER

With a series of strokes from a hatchet of economic pain, President Truman last week signed the first Federal Airport Act and put CAA on the biggest, and most important spot of its thirteen six-year career. It is, however, a spot of CAA's own choosing. It and its predecessors have pleaded for a national airport development program since 1929.

Planning for such a program already is in its initial stages with field men of CAA's airport division in Washington, conferring with Charles B. Douglas, assistant administrator for airports. The planning for actual projects will not get underway until after July 1, beginning of the next fiscal year.

\$4,400,000 Fund—The act authorizes an immediate appropriation of \$4,400,000 for the formulation of a National Airport Plan, which must be the basis for the first request for a construction appropriation. Good, but work was for the Senate to tack an amendment appropriating that sum on the CAA 1947 appropriation bill—now before the Appropriations Committee. At best, the outlay plan could not be completed before Fall. (The tentative plan submitted to Congress in November, 1945, took four months, with no special funds available and only a handful of people working part time on it.)

Before the plan can be sent to Congress with a request for the first year's appropriation, it must pass Budget Bureau examination. The Bureau frowned on the original, extremely deficient 1944 plan which therefore was transmitted to Congress without Presidential endorsement.

Construction cannot begin before Spring, 1947. By that time it is hoped the shortage of construction

material will be somewhat alleviated. If not, present restrictions will limit work to clearing, grading and runway installation. The act permits CAA to share cost of administration buildings, but this phase might have to wait until materials are available.

Robert H. Beatham—Reaction of all segments of aviation to the President's approval of the act is one of relief after years of striving toward a goal finally attained. But with this feeling is another that now it is up to CAA. Congress has committed itself to appropriate more than \$500,000,000 during the next seven years for airport development, and that sum will be matched by states, counties, municipalities or other public agencies. In the driver's seat of a billion-dollar program, CAA is in a position to do more for aviation than ever before.

CAA Action Speeded

Under the airport act, CAA is required to start two months before the start of the fiscal year to submit to Congress a list of projects for Class 4 and major funds (generally terminal airports in large cities) inasmuch as that division had already passed for April 1947 before the President signed the act. Sen. Pat McCarran (D-Nev.) last week introduced a bill to correct that flaw.

McCarran's measure permits CAA to submit its list for fiscal 1947 anytime during the year, but the agency would have to withhold construction for a 60-day period during which Congress could take any action. Quick action is anticipated on McCarran's proposal.

(The appropriation for the first Federal-aid highway act in 1941 was \$15,000,000. Out of that and successor funds totaling about \$1,550,000,000 has come the highway transport industry which in all its jurisdictions generally employs 7,500,000 people, 14 percent of the nation's total employment.)

The Federal Airport Act is the only last-year, excluding the highway act, of the Federal Govern-



PAA MAKES FIRST VISIT TO IDLEWILD

A Pan American Constellation is shown over Idlewild airport, with temporary administration building and control tower in the background. Commanding city officer of New York City and vicinity as an inspection flight, the ship made three low-altitude approaches to the field.

ment's growing direct financial assistance is a medium of transport. That is CAA's most and opportunity. If the airport program fails, CAA will get the blame; if it succeeds, CAA may well be responsible for an aviation expansion that eventually will rival that of highway transport.

Donalson is Key Spot—In the key spot is Mr. Donalson who under present plans will be in sole charge, answerable only to Administrator T. P. Wright. Under Donalson now are 236 employees, 143 in the field, and 93 at present temporarily engaged in the airport disposal program. Donalson's staff functions through three branches: Planning Service, headed by Edgar M. Smith (who will have charge of developing the National Airport Plan); Engineering Service, directed by Philip Moore; and the Requirements Service, directed by John H. Shuman.

That organization set-up is expected to be organized, with the personnel expansion taking place within it. Even CAA does not yet know how great a staff will be needed, but it is certain that a several hundred percent increase is in prospect.

However, Donalson's chief headache may stem not from budgetary, planning or personnel problems. In juggling the original federal proposal to channel funds for construction of small and large airports to states and cities respectively, Congress found the red-tape and confusion insurmountable between urban

Michigan Airport Test

A "Trendy" test is to be held soon with the Michigan State Supreme Court will seek to determine whether or not the state is authorized to construct or improve airports. Meanwhile plans to construct and improve 40 airports have been held in abeyance following a recent ruling by State Attorney-General John D. Marshall. He ruled that the state constitution does not permit airport construction or improvement by the state, since, according to his view, such construction does not constitute "an internal improvement."

and rural areas right into Donalson's lap. Historically, CAA has worked closely with the states and lately has arranged in a compact to build up the facilities of the state aeronautical bodies.

Cities Have Funds—Yet, the large cities have the money and plan ready to go far airport construction. No definite figures are available, but representatives of the cities estimate they have somewhere more than \$500,000,000 already earmarked for airports. In contrast, 43 of the 48 states responding to a recent survey showed that only eight have airport funds appropriated or available, and the total is \$3,600,000. San Francisco, alone, has voted a bond issue for more than twice that sum.



HARRINGTON'S AIRPORT RESTAURANT:

"One of the finest airport restaurants in the nation" is the claim for the new \$225,000 "Sky Club" with 235 persons seating capacity which has been opened by James H. Harrington, at Minefield (Ohio) Municipal Airport. A round-top glass-enclosed light dock club and dining room (shown above) is reserved for ferry and aviation industry people, while a first-floor dining room is open to the public. A sandwich-quick bar, an



open air terrace restaurant, and all-electric kitchen, attractive men's lounge and women's powder room, and parking facilities for several hundred cars, are other features. The white colonial restaurant is managed by Lt. Col. Robert E. Durbin, former manager of Lufthansa Field restaurant, New York, and more recently commanding officer of Bowen Field, Louisville, Ky.

The act contains a guard against a large city snafu. Projects for Class 4 and larger airports must be submitted for Congressional approval. And though CAA need pay one-half the cost of Class 3, 2 and 3 airports, it may pay up less than that for the larger fields. But 20 percent of each year's appropriations goes into a discretionary fund where the administrator may use as he sees fit. This is likely to be a major battleground.

EAL Recommended For New K. C. Routes

Certification of Eastern Air Lines to provide direct air service between Kansas City and the Southwest was recommended last week by Public Counselor Merle P. Lyon in the Kansas City-Memphis-Peoria case.

Lyon said extension of Eastern's A38 48 from Memphis to Kansas City via Springfield, Mo., not only would meet the public need for a through Kansas City-Florida service but would strengthen a relatively weak route. Kansas City-Memphis local traffic and additional Kansas City-Florida through traffic would enable EAL to increase schedules and place larger aircraft on that route, according to Lyon.

He added that Eastern would provide Kansas City with better service to west cities than could be offered by Mid-Continent, or Delta, the other applicants.

AAF Budget Pared For Peace Operation

\$481,370,000 to be spent for new peace operations allowed \$174,257,000, A7C was \$10,000,000

The war-to-peace conversion of military aviation is reflected in the 1947 fiscal year Army Air Corps budget estimate, totaling \$1,200,000,000, submitted to Congress last week.

Total Air Corps obligations for the present fiscal year estimated at \$1,193,000,000—a portion of which will be met with carry-over funds—compared with 1945 fiscal year obligations of \$1,230,323,034. Air Corps obligations during the present half-fiscal year, ending present fiscal year totaled \$1,343,434,038.

Key items in the coming-year Air Corps budget estimate:

- For procurement of aircraft, \$481,370,000, which compares with 1945 fiscal year expenditures estimated at \$187,500,000, and 1945 fiscal year expenditures totaling \$13,312,172.
- For expenditure of deposits and stores, \$341,240,160, or substantially below 1945 obligations of \$331,232,185.
- For research and development, \$17,137,000, which approximates the \$16,975,000 set aside for that activity during the present fiscal year and is slightly larger than the \$16,825,000 expended during the 1945 fiscal year. (An additional \$10,000,000 is included in the 1947 budget for testing equipment. Over the present fiscal year, \$7,000,000 was spent on testing equipment.)
- For Air Transport Command, \$11,000,000, which compares with a 1945 fiscal year expenditure of \$13,900,000.
- For down-out industrial mobilization plans for the conversion of another war emergency, \$14,500,000. With the last war still in progress, no funds were expended by the Air Corps on future-war planning during 1945, and only \$2,900,000 has been spent during the present fiscal year since V-J day.
- For facilities for pilot training \$700,000, only a fraction of the \$12,281,000 expended for this purpose during 1945 fiscal year. An estimated \$4,000,000 is being obligated during the present fiscal year.

The 1947 Air Corps budget omits funds for two activities which have been discontinued—the Civil Air Patrol and operation of modification centers. The Air Corps expended



TWIN-COCKPIT LIGHTNING

A little-known experimental first-coupler of the P-48 Twin Mustang long-range fighter developed by North American Aviation was the Lockheed P-48 Lightning, which was modified by the AAF adding second cockpit in the left bow. The modification made it possible to test the use of two pilots in fighters for long-range missions.

\$28,000 in CAP during the present fiscal year, \$20,877,340 on modification center operations.

On the other hand, the 1947 budget allocates \$2,000,000 for small-scale expansion of glider procurement by the Air Corps. The AAF made no outlays for gliders during the present fiscal year, but expended \$174,548,000 on engineless aircraft during 1945.

Other items included in the coming year AC budget are:

- For modernization of equipment in service, \$15,000,000, an upswing from present year expenditures of \$10,000,000.

- For maintenance material for aircraft, \$32,104,545, comprising with 1945 expenditures of \$13,000,000.
- For procurement of communications equipment, \$10,477,000, or slightly less than estimated 1945 outlays of \$12,000,000.
- For aircraft fuel and oil, \$80,000,000, comprising with present year obligations of \$280,000,000.
- Medical research and development, \$28,000. Obligations during 1945 totaled \$1,073,240.
- Metereological and climatological research, \$10,000,000, comprising with \$1,000,000 being expended during the present fiscal year.

Supersonic Planes Planned

Two disclosures last week showed that American research in pushing closer and closer toward the heretofore long-prohibited barrier of supersonic flight.

Aerodynamic success at a Langley Field, Va. NACA test, disclosed that two airplanes now being built by American manufacturers with the expense of exceeding the speed of sound are expected to fly by Jan. 1, 1947.

Bell Aircraft Corp., disclosed that a plane equipped with swept-back wings, tested for supersonic flight, made first flights recently near Dallas, with A. M. (Doc) Johnson, Bell test pilot at the controls. The plane was a Bell P-48 Kampboxer fighter used as a ground test platform for the swept-back wings. It was pointed out that the plane was not expected to exceed the speed of sound, but that an performance would supply valuable data for future supersonic designs. The P-48 plane

has been redesigned L-38, in its new form, by the Navy Bureau of Aeronautics which is attempting to test the wings on a complete set of a revised scale of 20 degrees. The wings are to be swept-back wings of varying angles have also been used other planes, including the Curtiss Alexander XP-55, and various Northrop Flying wing versions.

Marked progress is reported in recent months in research on the difficult problem of the transonic speed range (700-900 mph).

The problem of instability of swept-back wings in lower speed ranges is a serious one. A possible solution, which is being considered, is as a proposal for a wing with variable sweepback, which would have a conventional straight leading edge at low speeds for handling and takeoff, but would automatically assume a high degree of sweepback when the plane approached the speed of sound.

CAB Approves New Wage Group For Expected Twin-Engine Disputes

Conference to represent 14 air lines with authority for pay negotiation on all types of equipment; Transair's three-man fact-finding board delayed on TWA case.

By BLAINE STUBBLEFIELD

Appointment of the three-man fact-finding board, to recommend terms of settlement in the dispute between pilots and TWA and between pilots and the airlines were consecutive over four-engine flying pay was delayed after the White House order (AVIATION NEWS, May 11), so that the board had an initial week of the 30 days allowed for a report. Probably it will ask for an extension of time beyond June 7. Meetings were scheduled to begin last week in New York.

Meanwhile the airlines were another round in the battle by getting CAB approval of a second wage negotiating committee to handle anticipated disputes on pilot pay for flying two-engine planes. The new committee represents the original 33 first-engine operators, and Mid-Continental, and has authority to negotiate pay rates on all types of equipment. It was expected that the second committee would supersede the first, retaining the same officials, and that a paid secretary would be employed within the next few days, to handle business which Chairman Ralph Darnon and his committee staff do not have time for.

Lawrence on Board—William M. Lawrence, best-known member of the emergency board, was many years a member of the Railway Labor Board, member of the three-man fact-finding board, to recommend terms of settlement in the dispute between pilots and TWA and between pilots and the airlines were consecutive over four-engine flying pay was delayed after the White House order (AVIATION NEWS, May 11), so that the board had an initial week of the 30 days allowed for a report. Probably it will ask for an extension of time beyond June 7. Meetings were scheduled to begin last week in New York.

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Pratt Engine: Developed especially for submerged, pusher installation in light planes, this new Franklin 748" engine produced by Associated Motors, Inc., will be used in the Republic Super. One of its features is a propeller shaft extension.

Behecho Over-ruled—Behecho still insists that he will deal only with industrial airlines, severely with TWA only. NMB tried to

bring along with him during months of negotiation, but over-ruled him with recognition of the wage committee in its recommendation that the emergency board cover the entire controversy.

ALPA contends that, since no dispute exist within the meaning of the Railway Labor Act on the other side, on which no strikes have been called or are presently contemplated, NMB's recommendation is improper and illegal even in so far as it applies to TWA, on which a strike was set to begin at mid-night May 1.

Strike Now Imminent—A meeting in Chicago of the TWA Pilot's Master Executive Council considered the President's order and Behecho charged his "temporary" postponement of the strike to "sabotage." He urged the White House that ALPA's appearance before the emergency board would "necessarily have to be limited to the TWA dispute."

Indignant observers and the emergency board's study and conclusion may throw some light on the question whether a crisis can be averted by bargaining with employers collectively, as in the case of the airlines, or not. They added that the pilots can strike at any time, in violation of the Railway Labor Act, without penalty. The emergency board has no coercive or punitive power.

New Franklin Engine To Power Republic Super

A new 325 hp. Franklin engine has been developed by Alvin Motors, Inc., Syracuse, N. Y. Although designed to power the Republic Super, the engine is available for installation in other aircraft, the company's president C. E. B. Roth states.

Already certificated by CAA, the Franklin "325" was selected to operate efficiently in a submerged pusher installation with cooling furnished by a direct-drive fan. It produces its rated 315 hp. at 2,500 rpm. on 60 octane fuel. Weight is approximately 450 lb.

The fan is attached to the crankshaft and operates at crankshaft speed. Another special feature of the engine is a propeller shaft extension which is supported by the propeller shaft bracket and installed in the crankshaft. The extension furnishes a handy place for mounting engine accessories.



FLYING WING FORERUNNER

Years of experimentation and testing of actual designs went into building of the *Marking XB-15 flying wing* (AVIATION NEWS, May 4). One of the early models was the 63-ft., twin-engine NMM, three of which are shown here for the first time in formation flight over the Mojave Desert, near the AAF's testing station at Muroc, Calif.

NAA Considers Plan To Strengthen Organization

The board of directors of the National Aeronautics Association has taken under advisement a plan to refine and strengthen the organizational structure at the national level, which probably will be presented to the annual convention in Omaha July 15-18.

Meeting in Washington recently, the board also studied the Mitchell bill offered for a national air policy, and heard a report on NAA's air safety campaign, submitted by Jerome C. Leander, vice president for safety. Also presented to the board was the NAA economic study of airports.

David Is New Assistant To C. M. Young at CAB

Frederick Davis (photo), formerly an attorney in the General Counsel's office at the Civil Aeronautics Board, has become assistant to Chairman M. Young, newly elected member of the Board.

David, who holds a private pilot's license, joined the CAB in 1938, when he was in the Army Air Corps two years before he joined the Office of General Counsel in November, 1944. His home is in Indianapolis, Ind. He attended Colorado College and was graduated from Indiana Law School. He has LL.B. and J.D. degrees, and is a member of the Indiana Bar.



AVIATION CALENDAR

- May 14-15—American Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 15-16—1945 National Aviation Convention, Detroit.
- May 16-17—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 17-18—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 18-19—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 19-20—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 20-21—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 21-22—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 22-23—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 23-24—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 24-25—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 25-26—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 26-27—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 27-28—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 28-29—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 29-30—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.
- May 30-31—1945 National Association of Aircraft Engineers, 1945 Annual Meeting, Cleveland, Ohio, 1945.

News Digest

DOMESTIC

- Charles A. Bialostocki, vice president for sales, and a director of American Airlines, resigned last week for "reasons of health."
- Non-Stop Denver-A. A. service will be started by Western about June 1.
- World Airline Ranked by Passengers in 1,000 airplanes class was set by a 10-2 of 4th Air Force, with over 12 tons of bombs over Germany. Bombs attacked 33,346 ft. Denver record was 23,378 ft. set in 1936.
- N. E. Berlin Passenger Service was to be operated by Eastern Airlines with 20-passenger DC-4. Four to Berlin will be \$22.50 less than the 1st class, 27th less overhead.

FOREIGN

- Daily Air From Berlin was in effect (Paris, Zurich, Geneva, twice weekly). Paris-Berlin, thrice weekly. Paris-Berlin-Amsterdam, twice weekly.
- King, Gen. A. C. Celler, became managing director general of BOAC, will head new British air transport company (Olympic, Ltd.) to operate world-wide charter services.

FINANCIAL

- Fairchild Engine & Airplane Corp. 1945 net was \$10,054 (August 31, 1944), or 34 cents and \$1 is a share. Sales were \$4,911,438 and \$3,023,963. March 31 backlog was \$72,580, 900 plus letters of intent at \$1,000,000.
- Air Associates, Inc., first quarter was \$52,100, or 36 cents and \$1 is a share. Sales were \$1,111,438 and \$3,023,963. March 31 backlog was \$72,580, 900 plus letters of intent at \$1,000,000.
- United Air Lines first quarter loss was \$21,100, or 36 cents and \$1 is a share. Sales were \$1,111,438 and \$3,023,963. March 31 backlog was \$72,580, 900 plus letters of intent at \$1,000,000.

P-80 Miss Flight

A mass flight of 35 jet-powered Lockheed P-80 Shooting Star fighters took off from Maxwell field, Ala., on May 25, 1945, on a mass outburst to celebrate the 50th anniversary of the birth of the Republic of the United States. The flight was scheduled to arrive at Washington National Airport yesterday after five days and four hours on the way. The return flight was due to start May 25. Designated as "Project Comet" the mass flight was expected to provide valuable experience in mass formation and supply problems.

Tailor Lightplanes to Meet Market Needs, Experts Advise

Use of automobile gas and accessories to cut costs; swept leading edges recommended; silenced props and better performance.

By ALEXANDER MCMURLEY

Veteran stimulant to progressive thinking among personal plane manufacturers was provided last week by three well-known aeronautical engineers. Speaking independently Grover Lowing, John H. Gease, and Peter Altman, analyzed today's personal plane and offered constructive suggestions for following it to meet better the needs.

Most detailed of the three blueprints for a better personal plane was given by Altman, Detroit consulting engineer, speaking at a Detroit aeronautical meeting of the Institute of the Aeronautical Sciences.

He called for:

- Use of available aeronautical design data to clean-up personal plane fuselages and wings designs eliminating "buffin" (wind-tunnel) and improving performance of low-power planes to 120 mph cruising speed without loss of horsepower.

- Additional marginal performance for takeoff and climb.
- More comfort for plane occupants.
- Better and freer landing gear.

- More universal instrument and radio flying equipment.
- Elimination of carburetor icing hazard, by fuel injection or other means.
- Operation of planes on premium auto gasoline.

- Use of automobile parts and accessories to cut costs.

Kidn weather starting equivalent to that of automobiles.

Reduction of propeller noise, perhaps by using smaller diameter propellers and more of them.

Altman predicted that what jet cooling would be practical on the near future, and would supply pusher engine installations. He expects central locations for both pusher and tractor engines, with extra engine shafts will make possible better streamlining of personal planes soon. Among unconventional design combinations currently being considered are: two engines turning one propeller, and one engine turning two sets of propellers.

Lowing, consultant for the National Advisory Committee for

Plan Aviation Suburb

Kern County, Calif. Superintendents have approved plans for development of a \$10,000,000 exclusive aviation suburb, to be developed two and one-half miles northwest of Bakersfield. The development will be 300 ft. around a central landing strip. Each home built will be equipped with an airplane hanger and apron. The layout provides for continuously wide streets so that private planes may be towed between the home hangers and the airstrip at the center of the village. The project has been approved by private interests, and is now under consideration, Civil Engineers, county airport manager declined comment.

Aeronautics, and chairman of the board of Rosecrans Field, Inc., New York airport authority, also recently visited the Altman ideas, in a talk before the New York State Aviation Council, at Westchester Country Club, N.Y. last week. The Council plans to:

- Better commercial performance for takeoff and climb.
- Cruising speed of not less than 120 mph.
- Improved landing gear for smooth landings.
- Radio devices for collision warning, with at least one mile range.
- Shielding propellers as well as engines.

Lowing also paid "tribute" to New York Commissioner Robert F. Wagner, for his failure to provide landing facilities for private aviation despite his expenditure of vast sums in the New York park system. Gease, personal flying consultant to the CAA, also speaking at the Westchester meeting declared that the flying public was primarily responsible for shortcomings of today's personal planes. He pointed out that some flyers had opposed development of completely simplified control planes, because of the hazard of transferring from such planes to other more conventional ones.

He asserted that today's airplanes have "programmed built-in" in the matter of average required for landing.

Today's airplane he said, cannot land and take off in the field where the Wright Brothers demonstrated the first military plane. The Sikorsky plane which first crossed the English Channel had centering wheels so it could be landed crosswind, while

most of our modern planes require all-direction landing facilities, with increased acreage. Parking way airplanes of the early days, had been replaced in the country by fixed wing personal planes requiring three times as much hangar or parking space.

Gease called for noise reduction in airplanes and suggested the development of airplanes which could land in a strip 150 by 300 ft., with 30 to 1 approaches, and which could be parked in 10 by 25 ft. A plane with such performance can be guaranteed, at the sacrifice of some other characteristics, if the public notes it, he declared. He warned that development of such characteristics can be retarded if the planes must use fields large enough for conventional military types. He called for a reversal of policy to encourage planes to use smaller fields, instead of selecting airport sites on the basis of later enlargement to commercial size.

Lightplane Arrestor Aids in Emergencies

A new arresting device designed to enable small planes to make emergency landings in very small fields has been developed and successfully flight-tested by All-American Aviation engineers, the company announced last week.

The arrestor has been tested in numerous flights at Lakewood Field, Wilmington, Del. using a Piper Cub plane. It causes the airplane to come to a complete stop within 100 to 200 ft. of touch-down, using a device weighing only a few pounds which is attached permanently to the airplane and is operated by the pilot, from the cockpit.

The arrestor uses a kerosene-like tube, from which a starburst ignites a shot by a sensitive powder charge. The spark is fired by the pilot as he approaches for a landing. It buries itself in the ground, an-

Field & Stream Dept.

Croquet hunters on the Western ridges are learning one of the first lessons of early lighter plane days—never shoot your powder off! Reports from the county meeting of the Field and Stream Club, which has "hook deer" who inadvertently blew the birds away when using hookshot, while the animals kept off unscathed.



SIKORSKY HELICOPTER INTERIOR:

Two photos of the interior of the Sikorsky S-51 four-place helicopter show the control instrument and control instruments and the luxuriously upholstered cabin which comfortably accommodates three passengers on the back seat. The control picture shows the push control lever with motor-type throttle at left; rudder pedals controlling the anti-rotate tail rotor, and the conventional stick, which controls cyclic pitch in center. Instruments are mainly conventional aircraft instruments, except for the combination tachometer at right of panel which indicates engine and rotor rpm. Note NC on cabin door at right, part of the first commercial license issued to a helicopter.

choosing one end of an electric nylon rope. The other end of the rope is attached to the airplane, and "pulls up" the plane to a stop without ground looping or tipping over, after a very short run.

The device is expected by All-American engineers to reduce greatly losses of lives and airplanes and damage to small airplanes and equipment resulting from forced landings. Coupled with the All-American pickup system to launch airplanes and airplanes from short fields, the new arrestor device opens up new possibilities for emergency operations from tiny airfields heretofore, too short for such use. The arresting device also has valuable potential military applications for use with gliders and military planes, limited only by the amount of weight which the device will successfully arrest.

3100 Examiners Predicted

The current group of 1808 CAA-designated flight examiners for private pilots will be increased to approximately 3100 by the end of this year to assure additional service for pilots applicants. T. F. Wright, Civil Aeronautics Administrator, disclosed last week.

Denver Buzzing Ban Grounds First Pilot

In the first case of its kind in the Rocky Mountain area, Denver police arrested an ex-Wiley flight pilot, recently after an erratic "show-off" flight over an eastern residential section of the Colorado capital.

The pilot, Henry Earl Rapp, 21, a Colorado University freshman engineering student, was charged with violating Article 1, Section 3, Paragraph 8 of the Municipal Code which deals with reckless and inhuman flight over the city.

In addition to being cited by two Denver patrolmen, who he landed his rented Waco biplane, the pilot also found State Inspector O. C. Leffertiller of the CAA, willing to prosecute his commercial pilot's license.

The aerial stunt flying ordinance carries possible penalties of not less than \$10 fine and five days in jail, not more than \$300 fine and 90 days in jail.

Pilot reported that Rapp was attempting to make a passenger "stunt" by acrobatics, but failed to give a satisfactory explanation of his chasing a law officer and a city area for his performance. He was released on \$700 bail.



CLUB MEMBERS BUILD HANGAR:

Five months of hard labor by members of the Reading (Pa.) Aero Club at Berks Airport, Inc., Reading, produced this sturdy-looking and modern structure hangar. Members beat the lumber shortage by cutting their own wood from a wooded behind the hangar and sawing it into useful sizes with a second-hand sawmill which they also purchased. Besides housing 20 planes, six of which are parked, the hangar includes space for a maintenance and paint shop, pilots' club and office. There are five other hangars on the field and 25 individual hangars are to be added soon.

Michigan Conference Asks Better Planes

Aspirants for better personal aircraft engineering and more Class I airports, and proponents of much greater utilization of personal aircraft were heard at the recent First Michigan Personal Aeronautical Conference, at Lansing, Mich.

Headline speakers included Alfred Marcher, president, Hagglund Aviation Corp., William H. Stuck, consultant to Canadian-British Aircraft Corp., Col. Noose Turner, president, National Aviation Trades Association, and officials of organizations representing operators, private flying, feeder and scheduled airlines, and tourist services.

New Jet Discussed—Marcher, while declaring that his firm already has a Government contract for a faster jet ship than the XF-94, commented on the necessity of aircraft manufacturers turning their attention to better personal aircraft engineering. He added that his own firm "shouldn't have to tell far more than \$2,500 and size dip will be able to tell it for that."

Turner called attention to the Michigan Department of Aeronautics' emphasis on Class I airports. "We need more of them and fewer 'paper airports' like Idlewild," he said. "Too many communities are overbuilding airports."

POB-Airways Facilities—Michigan Department of Aeronautics officials commented about cooperation of air-traffic, radio and weather facilities. Last the matter squarely before CAA officials attending the session. George Voss, regional CAA administrator, stated that it was not CAA policy to establish such facilities, but expressed the hope that a start might be made that Summer in northern Michigan and northern Wisconsin.

New Air Country Club For Rocky Mountains

Establishment of an aviation country club for tourists visiting Estes-Rocky Mountain National Park, also has been announced by V. C. Baumgarten, head of Aviation Associates, 944 N. Michigan Avenue, Chicago.

Besides making facilities of the leading field near the park available to private flyers who come in to their own planes, the Estes-Rocky Mountain Country Club and Bates Service Aviation will make always and jobs available for visitors.

Briefing For Private Flying

Engineering & Research Corp., Roseland, Md., checked up recently and found it had made its 2000th biplane since V-J-Day. The company with the company's total jet-war production of 112 Douglas. The 2000th plane was delivered to the Allentown Aeronautical Co., in Pennsylvania.

OBDO PATROL FLIES AGAIN—Northern Ohio's Duxon Patrol has been revived by the veteran private flyers who organized the pre-war organization, and has scheduled its active spring and summer series of 24 bi-weekly biweekly flights to operate in the northern half of the state. On the first flight of the season 154 planes flew into Cleveland airport and more than 100 breakfast air tourists were served at a pavilion of James Hanagan's new SkyClub airport restaurant. Patrol officers are: Edward F. Hensley, Northfield, president; D. S. Brown, Norwalk, George H. Seneg, and William Schickeloff, both of Cleveland, and Fred Freely, Akron, all vice-presidents; Alfred M. Pader, Cleveland, secretary-treasurer; D. S. Brown, Allentown, photographer, and Lucille Hensley, Northfield, assistant secretary. Before the war the patrol reached an active peak membership of 250.

DYNAMIC PROPELLER—A one-piece 60 hp. sport plane built by Skandinaviska Aero A. B. of Norrtälje, Sweden, is equipped with a Dynamic propeller, which adjusts its pitch automatically without attention of the pilot, achieving the same result as the Aeromatic propeller used in this country. The Swedish propeller uses an hydraulic actuating mechanism, and, instead of two cables as attached to the blades of the propeller blades, the blades are twisted to a smaller or larger twist angle. The amount of air pressure is governed by a small disk mounted in the hub of the spinner. Varying external air pressure on this disk, caused by change in forward speed, or flight maneuvers, varies the pitch, automatically.

BOGE RANCH AIRSTRIP—A private flyer airfield in being developed near Tucson, Ariz., at Wayne Wood Coast Ranch, owned by Ross Hatter. It has a 2,600 ft. SE-SW runway all tarmac, is being completed near the recent. Flying club plans to have the road in and use the air strip during their stay. Operators of the airfield, Skyrides, Inc., include Orlando and Donna Miller, John Golden, Eugene Steinhilber and Bud LeCave. They will operate a flight school, and general aircraft sales and service for private flyers in the vicinity.

UNION BUYERS COUNCIL—International Association of Mechanics has purchased a modified twin-engine Cessna for use as a plane from Beech Aircraft Corp. for use of its general engine representative, C. R. Houser, as an expansion of his flight school. Houser was told delivery of the plane at Wichita and it would be used in visiting local union members, and that the IAM was planning to buy one or more four-place Model 30 Bonanzas for similar use when they become available.—Alexander McKinley

Airline Connection—By prearrangement BSA planes will meet airlines at Denver and Cheyenne airports and will fly passengers into the Park for a charge only slightly in excess of surface transportation charges.

The Kites field now has one 3,000 ft. runway of hard-packed decomposed granite and plans are underway to build another runway of 5,000 ft. The clubhouse and a considerable golf course adjacent the airfield. Meals and refreshments are served at the club and free transportation is provided to the nearby town of Estes Park for all its tourists.

Private For Private—Private travel in mountain flying will fly by night over the park in a No-

vaire, a Stinson, a Stearman and a Taylorcraft and additional equipment is being acquired. The Stearman, a surplus Army liaison plane, is especially adapted for aerial photography work and has been assigned to do a considerable business with amateur and professional photographers who wish to obtain their own pictures of the mountain scenery from the air. Arrangements have been made to give photographers wishing to make such flights priority.

The town has an altitude of approximately 7,500 ft. and is located at the eastern entrance of the 400-sq. mi. park area, which has elevations ranging to 14,330 ft. in elevation.

SPECIAL AIR SERVICES

CHARTER

NON-SCHEDULED

INTESTATE

U. S. Airlines, with 14 C-47's, Plans Added Routes, Schedules

SIC report reveals growth and expected nation-wide service of Florida uncommitted scheduled cargo carrier.

Expansion in routes and schedules, and growth of its fleet to 14 C-47's are reported by U. S. Airlines, Inc., 84 Petersburg, Fla., in latest information filed with the Securities & Exchange Commission.

As reported last week, the company registered 990,800 shares of \$1-per common stock, and 100,000 stock purchase warrants. Stock will be sold to the public at \$25 a share, with the company receiving \$2,475,000, or \$24.75 each, net.

Incorporated June 8, 1944, in transportation by air under contract with shippers, the company now conducts its cargo-carrying operations as a scheduled basis. In addition, it conducts a food-bus operation at Albert Whitted Airport, St. Petersburg, in which it provides passenger plane rental and charter service and maintains shops for aircraft repair. It also operates a sales agency for its aircraft and parts and conducts a flying and ground school. Cargo transportation, however, is company's principal business and will remain so.

Actual flight operations began Dec. 5, 1944. During December, 26 round trips were made on a non-scheduled basis between points in Southern Florida and various cities. **Goals set Schedule**—In January, 1945, management decided that the interests of shippers could best be served by operating on regular schedules. Twenty-two flights were made during January. Company began operating on a daily schedule Feb. 1, with transportation of round trip flights between Miami and New York, New York and Boston, and New York and Chicago. On Miami, 14 flights were inaugurated between Florida and Chicago via Atlanta, St. Louis and Cincinnati.

An additional service became available in the U. S. Aircraft's intention to increase the number of flights and to add new flights between cities not now served. It is

expected that direct flights will be commenced in the near future between Boston, New York and New Orleans, and it is also contemplated that schedules connecting New York and other eastern cities with West Coast cities including San Diego, Los Angeles, San Francisco, Portland and Seattle will be established.

As of April 15, 1945, the company had contracts with shippers in four cities. In addition it has sales representatives in New York, Chicago, Washington, Fort Pierce, Fla., Miami, West Palm Beach and St. Petersburg.

Operating Statistics—During its initial, five scheduled operations, U. S. flew 93,567 miles on 30 flights in December and 67,357 miles in 32 flights in January, 1945, ton miles flown for these periods were 56,213 and 41,943, respectively. After non-scheduled scheduled service the company flew 139,673 miles on 214 flights in February and 134,850 miles on 241 flights in March. During February 95.15 percent of its

schedules were completed and 38,562 ton miles were flown, during March 96.83 percent of schedules were completed and 46,890 ton miles were flown. In addition, 4,634 miles were flown on two non-scheduled flights in February and 3,917 miles on five non-scheduled flights in March.

During the first month ended March 31, the company's gross revenue from cargo operations was \$183,298, or 63.3 percent of its total gross revenue.

Company has filed for a certificate for common carrier operations over a Boston-New York-Atlanta-New Orleans route and expects to file soon a similar application covering a comprehensive system of routes. As of April 15, 1945, company had 224 employees, and owns six Lockheed Lodestar, one twin-engine Beechcraft Model D19B, three Cessna T-50's and 13 miscellaneous smaller planes. In addition it is C-47's.

Officers—Company officers are: President and director—Harry H. Pfaff, 84 Petersburg, Fla., is chairman of the Board of First National Bank of St. Petersburg. He is a stockholder and director of Alaska Airlines, Portland, Ore., Pullman Ridge, Tulsa, Okla., a vice president and director. He has been president of Falcon Seaboard Driftless Co., Tulsa, since 1933, and has been a director of Mid-Continent Airlines since 1934, and of Alaska Airlines since August, 1944. D. G. Blach is secretary-treasurer and director. He was formerly treasurer of National Airlines.



CHARTER FIRM'S 20th ANNIVERSARY:

Air Services, Inc., Washington, D. C., this year celebrates its 20th anniversary as one of the oldest and most successful charter operators in the country. The company began its first non-engine, four-passenger Cessna T-50's and one Waco on the line at the National Airport for sightseeing over the capital, air tours to Annapolis and the Potomac and charter operations in the U. S. Aircraft with Beechcraft, Piper, Stearman, Grumman, C. C. Air Service also has available on call from the Washington area a four-engine Beechcraft D19-B, another Cessna T-50 and a single-engine Beech.

One Woman Airline

Terry Aly Thompson, the one-woman-airline headed by Florence Terry, was to begin an unscheduled service May 23, between New York and Barre-Montpelier, three months after TAT started doing charters in all directions with its single, luxury Lockheed jetstream from Continental Air Lines.

The route from LeGrandville to Pittsburgh, Buffalo, New York, would include big stops at such similar communities as Newington, Manchester, Glen Falls, Haverhill and Berlin. Quarters will be added as it is planned to do the operation with CAM.

One Woman Line—Florence Terry, whose husband was killed in line of duty while flying as a test pilot for the Marine Corps, established TAT after serving thousands from prominent men who knew her late husband or his family, most of them members of the Democratic Alliance Club in New York. Now, Mrs. Terry, who has married in China, has reorganized and reformed TAT, leaving herself as non-president, chair of promotion and advertising. Reformed company is headed by W. F. Post, president, N. E. Ellis, former 4th Air Force officer, is treasurer and general manager, and the Ellis family have a financial interest. Karl Van Meter is secretary.

New Lines—From the start TAT has been an air carrier with about 100 charter flights were

from between LG and Palm Beach, Fla. Subsequently, Eddie Cadden's orchestra was down on charter to a number of cities, a flight was made with charter passengers to the Kentucky Derby, coast-to-coast charters were recently flown with stops at Reno on route Mrs. Terry, who has been a newspaper syndicate writer and landed publicity and public relations in her home-state company for charity, has introduced many new ideas into air travel. Former airline standard of luxury has been maintained in the brief one Lockheed. The interior is kept redecorated to include pictures in the cabin. Meals are served. Mrs. Terry introduced Tropicana, guests are asked to look like telegraph books and filled in by the stewardess who is provided with a portable typewriter. These guests are furnished to each passenger and include the usual information as announced, altitude and weather. Passengers are invited to write an estimate at the bottom as to the quality of travel at destination. **Wishes** with the closest given is awarded a bottle of imported champagne—at the end of the trip. This feature will be continued on the New England run.

Manufactures—Manufactures is being done at Newark Airport. With the reformed company and new finance, TAT looks forward to obtaining two more jets—probably DC-7s.

3 Carriers Serve N. Y.-Atlantic City

Atlantic City as a summer resort is beginning to replace Miami in winter as a passenger service run for non-scheduled and intrastate carriers.

Local charter operator to fly from the New York area is American Air Export & Import Co., large Florida fixed-base operator at Miami. Service and route of five DC-7s. Two of them are flying daily between LeGrandville, Field, New York, and Atlantic City as three unscheduled round trips with four each on Saturday and Sunday.

Puerto Rico Route—Three trips are being made between New York and Puerto Rico with occasional trips to Charlotte and other points within the U. S. President is Charles A. Carroll, vice president and general manager is Howard J. Kertin, vice president and business manager is Thomas E. Carroll, Glenn B. McNeil is superintendent of maintenance.

This operator has handled millions of conversions of surplus C-47s for other air-scheduled carriers at its Miami Springs base. On the New York-Atlantic City run, it has set up maintenance facilities at Reber Field, Atlantic City.

Other Services—American Air Export & Import will fly air-scheduled flights to Atlantic City to the scheduled intrastate flights from Newark by Atlantic Coast Airlines (formerly Otis Airlines which pioneered this route) and Rainbow Airlines, a contract carrier, which recently set up operations from Newark and obtained approval to fly intrastate from the New Jersey State Aeronautics Commission.

Atlantic Coast has two Lockheed 14s in this service with three round trips daily and four on Fridays and Sundays. It is planning to add Canadian, N. J., as a stop to accommodate Philadelphia and Trenton passengers. Rainbow is using two of its five DC-7s at its Atlantic City airport.

Flares—All three operators on the Atlantic City run are quoting about the same fares, with American Air Export & Import lowest, based on distance. This line, out of LeGrandville, Field, charges \$18 on a 40- or 45-hour trip, plus 15 percent less Atlantic City has the same rates from Newark. Newark is 10 cents less, at \$7.95 one way, \$14.90 round trip.

PRODUCTION

Engineers Back AAF Proposals For Supersonic Research Center

AIA polls executives for reaction to multi-million dollar plan; huge new wind tunnel and unprecedentedly large power source necessary for supersonic airflow.

By SCHOLER RANGS

Tentative Army Air Force plan for a multi-million dollar research center are being strongly backed by West Coast aircraft engineers, while an effort is being made by the Aircraft Industries Association to obtain the reactions of the company presidents before the start of its Mitchell staff hearings. These are scheduled to begin today, after being postponed from May 6.

The AAF project (AIA News, April 26) would cost about \$10,000,000 for research into supersonic aircraft and related matters. AIA's interest has chiefly in seeking to determine exactly what is needed, the cost, and the division of authority and operations among the services, the National Advisory Committee for Aeronautics and the industry. The latter point is the basis of a joint agreement on national research policy between the Army, Navy, CAA, NACA and the industry (AIA News, April 1). Recommendations will be considered at AIA meeting in New York May 20.

Wind Tunnel—Newark—Atlantic Coast West Coast talk is in terms of an eventual expenditure of as much as \$2,000,000,000. Chief engineers anticipate that a large portion of such a fund would be expended in the building of a 16,000,000 hp. wind tunnel capable of meeting or exceeding the performance of Germany's wartime wind tunnel at Lake Constance which produced an airflow of approximately Mach 7—exceeding 5,000 mph.

No electric power source for such a tunnel exists and the engineers believe the only recourse is to follow Germany's technique, by which water from a high altitude lake was piped through a drop of several thousand feet to give a high pressure head to Pelton wheels driving axial flow compressors within the tunnel. Preliminary consideration has been

given to the use of Lake Tahoe or Crystal Lake, both in the West.

Power for Airflow—One aircraft engineer, qualifying the point of ultra high-speed research, pointed out that the liquid and average compressions have no comparison to the tremendous power necessary to produce airflow or light beyond the speed of sound, and cited for illustration the estimated horsepower of the Nazi V-3 rocket in full flight.

The V-3, producing 54,000 hp. initially, is able to carry the missile to a speed of Mach 10—7,000 mph—at altitude, and at top speed is producing approximately 160,000 hp.

Windmills as Engines—He said that associate chief engineers are positively unanimous in their estimation of the urgency of high-speed research, and the funds needed, for its attainment. He added, "10,000,000,000 sounds like, and is, a lot of money. It will not, however, be lost

money. While it is being spent it will be producing jobs throughout a large number of industries involved in developing the wind tunnel and other research equipment."

What such a program will do will be to produce positive knowledge of aerodynamics in a rather new scientific demand of present knowledge and will be a step toward full utilization of nuclear energy when it becomes available in controlled power.

Heated Rubber Linings for Jet Cores Developed

Electrically-heated rubber for intake cowls of jet-propelled or jet-powered airplanes now in basic supply by the B. F. Goodrich Co. That use of hot rubber, paradoxically, involves rubber fabrics which aid the cooling system by keeping air away.

James R. Pottler, manager of the company's aeronautical division, explained that the jet cowls draw the flow of air from the plane's leading edge over the intake, generator and other engine accessories to keep them cool. Accumulations of ice in a cowl can stop this cooling air flow as effectively as a wooden block.

Finished Inside Cowls—To meet this problem Goodrich, which developed the pulsing coating of rubber de-ice the airplane wing edge, produced the electrically heated rubber linings for the intakes of jet rows. They not only prevent ice buildup, but also serve as effective anti-icing shoes.



NAVY SHIPPLING.

Supplies airplane engines packed and stacked for disposal are part of reconstruction materials turned over to federal disposal agencies by the Navy, amounting to \$244,840,000 for the period Sept. 25, 1945 to April 6, 1946.



Capitola Air Carrier. They don't come much smaller or more luxurious than TAT. Most of the unscheduled airline company line up for this picture. From left, R. E. Ellis, general manager; Capt. Al Cross, former Navy band leader, who is also chief pilot; Florence Terry, now a vice president of promotion and publicity; W. G. Post, vice president; and First Officer Al De Pergebia.

Improvements Urged In 'Copter Controls

Engineering improvements of helicopter cockpit and controls is urged in a recent paper by Lt. Conrad James L. Baker, U. S. Public Health Service, read at a meeting of the American Helicopter Society in Philadelphia.

Physical and mental reactions of the pilot and his limitations must be considered as factors just as much as the mechanical parts of the helicopter, he emphasizes. In an emergency, the pilot may not follow through as a complicated control system, where controls are not within easy reach, easily operated and with actions clearly visualized.

Commander Baker warns designers that as the helicopter approaches the stage of mass use, it will be piloted by individuals with a more casual eye as adverse features of cockpit design. Any factor which produces fatigue, contributes to the pilot's sluggish or incorrect manipulation of the controls.

► **Designs Change**—If it specifically recommends design changes to meet these requirements:

- Sufficient width and length of the cockpit to allow for free movement of arms, shoulders and legs;
- Adjustable seat, and adjustable rudder pedals, with pedals designed to be actuated by movement of the leg, rather than extension of the ankle;
- Continued maintenance of a high degree of visibility, with special visibility sections for specific uses, and with visibility not obscured by

placement of instruments and controls.

Recommendations on controls include:

- Changing cyclic pitch control from its present position to a forward control column, not restricted by pilot's legs or knees, and use of a wheel control with a control, cam for effective one-hand control;
- Use of a smaller, shorter lever for collective pitch control, that may be easily actuated through the entire pitch range;
- Elimination of a single centrally located master pitch control and throttle, in favor of full dual controls, for side-by-side dual control ships, because of the difficult change for the pilot when he flies from the other side of the aircraft;
- Use of the constant speed governor appears as the "only solution" to the generally unsatisfactory control system associated with synchronization of throttle and pitch.

Other suggestions call for easily adjusted trim for the stable, constant static force gradient, perhaps artificial, which would give the pilot a natural "feel" as to the degree of control movement needed, providing the air speed indicator, the manifold pressure gauge and the compression ratio and engine tachometer together.

Leas Signs 20 Distributors

Establishment of a nationwide distributing and service organization for its aircraft radios and equipment has been announced by Leas, Inc., of Grand Rapids, Mich. To date, more than 38 distributors have been signed in 14 states and two provinces of Canada.



P-50 PHOTO SHIP

A new series of Lockheed's jet-propelled Shooting Star has been topped up as a photo-reconnaissance aircraft. Labeled the XP-50A, it carries in the nose a Fairchild K-17 mapping camera with a six-inch lens and a Fairchild K-22 with 36-inch lens. It is the first of a second K-22 for reconnaissance. The plane's nose also holds the Fairchild automatic radar direction finder set.

United Report Forecasts Relatively High Production

The annual report of United Aircraft Corp. points out that while the future scope of operations remains obscure the company anticipates a relatively high production rate for the immediate future in comparison with the previous year.

Net profits for 1945 declined, notwithstanding heavy cancellations of war contracts after V2-Day. Sales for 1945 were \$44,310,882.30 as compared with \$74,327,633.74 for 1944. Net profits for 1945 were \$13,455,284.25 as compared to \$13,969,339.55 for 1944. Net profits for 1945 were equivalent to \$9.39 per share on the revised stock outstanding after preferred dividends as compared to \$9.37 in 1944.

► **Backlog Declined**—United's order as of Dec. 31 also declined to approximately \$110,000,000, the lowest figure since 1938. During the year 1945 to date additional orders in substantial amounts have been received by United.

United is one of the first aircraft firms in the country to report that all claims relating to contract terminations since V2-Day have been satisfactorily settled. It also reports that price negotiations for 1945 have been conducted with the Navy Price Adjustment Board and that while formal discussion has not yet

been resumed it has been advised that a determination will be made by the Board that no excessive profits were realized by the corporation during the year.

Irving Reconversion Item Is New 'Chairhug' Type

Principal business of the Buffalo plant of Irving Air Chute Co. is now the production of "chairhugs," a type of parachute (H44) into the upholstery of private planes, a company spokesman reports.

He said similar orders for military parachutes from South American countries are expected shortly and that receipt of these orders would make operations in Buffalo as capacity "within six months."

With 1945 net sales less than half of the 1944 total, Irving Air Chute reported that consolidated net income for the year ending Dec. 31 dropped to \$38,436 from \$134,931 in the previous year.

"The problems arising from termination of demand by the armed forces of several governments for parachutes and related equipment are, particularly severe, since the company has been devoted exclusively to the manufacture of this type of product," it was stated in the firm's report.

Net sales during 1945 were \$1,130,000 compared with \$1,038,843 in 1944.

C-W Stockholder's Meeting Delayed By Terminations

G. W. Vaughan, president of Curtiss-Wright Corp., has announced that delays in substantial quantities as contracting was contract termination settlements, the volume and number of contracts are such that a date cannot be set yet for the annual meeting of Curtiss-Wright stockholders.

One of the major factors involved in the company's contract termination settlements has been the problem in connection with its acquisition of 17 wartime plants into the three which will handle its present output of engines, propellers and airframes.

► **May Show Loss**—The company, including its subsidiaries, has a backlog at approximately \$81,000,000 and is well along in its conversion but the reduction in activities following V2-Day and the expense in connection with the company's plant consolidation are such that a loss for first quarter's operation is indicated.



STRAIGHT AS A HELICOPTER FLIES!

► If you've seen a large cry, how long does it take you to reach the apex through traffic from mid-west? Or if your plane is in a similar area, how much time do you lose in getting to a point on one of the air lines? Fortunately, helicopter service is being developed in the solution to these difficulties.

A simple flight is recorded in the picture above—the first direct helicopter trip from Philadelphia's Southwest Airport to a coal in the center of the city. Both way picked up and delivered to a waiting Europe-bound air line. The distance this helicopter flew is 4 miles. The flight took 4 minutes. By city across the top is 8 miles—and takes 23 minutes! Yet Philadelphia is fortunate in having an airport much nearer downtown than most cities.

A helicopter takes off and descends vertically. Its landing can be made in less than a minute after its cruising speed, straight away, in less than 90 miles an hour.

Kellett is the oldest manufacturer whose aircraft design-production program is co-extensive in the helicopter field. We now plan to offer our services here, dependably, 20 passenger helicopters. They will save you time and money in getting cargo from points from which you may wing around the world—or to the sea capital—on the Pacific or transportation, which you can speed and service with safety.

Kellett is a Complete Manufacturer, now making such products as: cargo hoists, winches, multi-blade and main-blades, electrical and mechanical theory and construction.

KELLETT AIRCRAFT CORPORATION, NORTH WALES, PA.

**KELLETT
HELICOPTERS**



"DRIVEAWAY, WICHITA"

Most terrible in delivery of lightness is that employed by Cessna Aircraft Co. Its two-place Cessna 140's can be loaded into the truck chassis, thereby cutting shipping charges. This method of delivery supplies the aircraft to the company's flying schools. Other personal plane manufacturers have been using railroad boxcars to ship disassembled aircraft.

German Engines Used Liquid for Ignition

Spark plug substrate saved fuel and enhanced knock-free performance, captured documents reveal.

Substitution of liquid ignition for the familiar spark plug in aircraft engines enabled the Germans to achieve fuel savings of as high as 5 percent, enhanced knock-free performance and a 600 percent increase in spark energy release, according to captured German technical documents released by the Department of Commerce.

The system makes use of a liquid which is sprayed into the cylinder and is ignited spontaneously by compression heat. Developed by I.G. Farben Industrie A.G., it was perfected in collaboration with Siemens-Motoren Werke, aircraft engine manufacturers.

Lead No Limitation—The liquid—

diethyl-diethyl-ether—attains fast and complete combustion entirely independent of the piston or piston mechanism used in the cylinder. It is also unaffected by the lead content of the fuel which, with conventional ignition systems, must be carefully limited in order to avoid fouling the plug.

Use of the liquid ignition system might eliminate the weight, power drain, radio interference and high altitude difficulties of the electrical ignition system and save as high as 50 gallons of fuel per hour on medium transport planes.

Britons to Build Four Brabazon Transports

Britons are determined to go ahead with construction of the giant Brabazon I transport, according to the Society of British Aircraft Constructors. If completed, the aircraft will be powered by eight engines,

seat 155 passengers, or sleep 50.

The British Government has authorized the Bristol Aeroplane Co. to build four Brabazon I's, the first to use conventional engines, the others to employ gas turbine units. The first of the series is now expected to fly about April of 1947.

Meanwhile, a proposition for the plane, which will weigh 219 tons and have a span of 320 feet, the "world's largest hangar" is being built near Bristol. In the form of a shallow letter T, it will be 418 feet long, 1269 feet wide and 116 feet high. The runway at the plant will also have to be extended to nearly two miles for the plane's takeoff. The hangar and runway are estimated to cost close to \$15,000,000.

Convair Paid \$83,600,000

In B-52 Contract Settlement

Settlement of the terminated AAP contract for B-52 bombers has been made with Consolidated Vultee Aircraft Corp. whereby the company was paid \$83,600,000 for cancelled orders in excess of \$948,000,000.

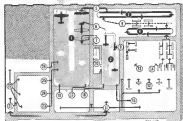
At the time of cancellation—shortly after VE-Day—the AAP had completed 1215 B-52's of a total of 1213 scheduled, for which it paid \$73,990,000. In the termination proceedings, the company was allowed a profit of \$10,600,000.

Of the 114 aircraft delivered, 56 were sent to training schools, 56 were forward to potential combat units and the remaining 14 went to the Pacific where eight saw combat. Approximately 90 of the last bombers eventually wound up at the scrapyard plant owned at Walnut Ridge, Ark., where they were to be broken up into scrap.

Kollsman Ups Production

Interest shown by private firms and manufacturers in the new Kollsman Seal line of aircraft instruments, has caused upward revision of company production schedules, with orders received thus far from 14 of the leading private plane makers, Westley C. Bea, Kollsman makes instruments, Elmhurst, N. Y., reported last week. Of seven navigation and instrument control instruments offered as the Seal line, four sell for \$30 or less each, representing approximately 56 per cent reduction in price over the present charge. The reduction has been made possible by redesign and by application of new wasteless quantity production methods.

TO ENGINE MAINT. FLIGHT TEST, FINAL PAINT'S SALES



WARD-KED ASSEMBLY LINE:

Manufacturing techniques developed in building Mustangs are going into North American Aviation's production line now being rolled to manufacture the company's four-engineer Martin personal airplane.

This flow chart shows the sequence of Mustang production: 1. Final Assembly Converter Line 2. Package Converter Line 3. Wing Converter Line 4. Wing Leading & Trailing Edge Converter Line 5. Wing Delivery & Turnover Converter 6. Package Delivery & Mating Converter 7. Engine Delivery & Installation Converter 8. Mainwing/Package Join Master Jo to Converter 9. Mainwing Join from Section to Master Jo to Converter Line 10. Tail Crk. General Foreman's Office 11. Sheet Metal Detail Parts Assembly 12. Eric Binding Machines 13. Package Join Assembly 14. Wing Sub Assembly 15. Engine Assembly 16. Engine Mount Assembly 17. Cooling Assembly 18. Canopy Assembly 19. Machine Parts Assembly 20. Parts Storage 21. Tubing 22. Hydraulic 23. Electrical 24. Seating & Upholstery

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PERSONNEL

Neal Leaves CAB To Practice Law

George C. Neal, for four years CAB General Counsel, last week resigned effective July 1 to enter private law practice in Washington with L. Welch Pagan, who serves as his father-in-law. CAB Chairman Irlie said next month.

The Board appointed Emory T. Stawicki, now Assistant General Counsel, Finance Legal Division, as Neal's successor.

Neal came to CAB when it was organized in September, 1939, was named Assistant General Counsel in August, 1939, and was appointed General Counsel in January, 1942.

Stawicki joined CAB in May, 1939, as an attorney and became Assistant General Counsel in charge of the legal phase of the Board's rate-making functions in October, 1942. He served as a Naval officer attached to the contract section of the Naval Air Transport Service from May, 1944, to September, 1945. Upon his discharge from the Navy he returned to the Board in his capacity as Assistant General Counsel.

Stawicki attended the University of Michigan and graduated from Harvard Law School in 1935. Before his appointment to the Board he practiced law in New York.

Nicholas Craig has been named sales manager of Pan American-Globe Airways with headquarters in New York. He will promote Panagra traffic and coordinate all sales, advertising and traffic promotion activities of the airline with those of Pan American Airways.



He has operated several bureaus, was also general traffic manager for United Airlines and has, more recently, been district manager of PAA in San Francisco.

Col. H. E. Reid, wartime deputy chief of the AAF's Office of Flying Safety, has been appointed flight systems manager for PCA. As the first PCA assigned Capt. James T. Disher, system chief pilot, has been promoted to the new 3D-40 jet bomber and Capt. B. H. Taylor has been named superintendent of operations control. Capt.

Moel Ertis becomes system chief pilot and Capt. Gary Foreman has been made Western regional pilot in Detroit. E. W. Kennedy, formerly chief of stations for the system and station manager at Detroit, has been made ground operations manager at the office.

Russell C. Johns has become vice president and general manager of Southern Flyer, a division of Public Service, War Department Bureau of Public Relations during the war, he has been in the aviation publishing field for many years.

Frank E. Sanderson, formerly division manager for Eastern Air Lines, has been appointed manager at the service department for the airline company with headquarters at New York. Sanderson joined Eastern in 1940 and has been on leave in the Air Transport Command.



Robert H. Ames, Raytheon Consulting Advertising Executive, has been named assistant to the director of public relations for PCA. Before being in the Navy, Ames was non-president of the Charles C. Bruchard agency, where he handled the account of the Times-Star and engaged in market and relationship studies, surveys and analyses.

Nicholas E. Berner, former member of the Carlson-Wright Corp. public relations staff in Buffalo, has joined the Craig C. Bruchard Advertising Agency, Buffalo, as account executive.

Fred F. Luciani, Boeing Aircraft Co. vice president who during the war managed the Boeing Production Division, has been appointed coordinator of experimental engineering and manufacturing.

He will assure that efficient and expeditious methods are followed in the design and manufacture of the new 3D-40 jet bomber and other experimental models. Luciani has been with Boeing since 1918.



PERELLE TO GAR WOOD

Charles W. Perelle, formerly vice president in charge of charge of Consolidated-Valley Aircraft Corp., and later vice president of Hughes Tool Co., has been elected president of Gar Wood Industries, Inc., according to Glen A. Bennett, retired. Perelle is regarded as one of the outstanding producers men in the country.

W. E. Thompson, formerly district traffic manager of United Air Lines at New York, has been named a special assistant to the president of United with headquarters in Seattle. He has new capacity in the Navy, Ames was non-president of the Charles C. Bruchard agency, where he handled the account of the Times-Star and engaged in market and relationship studies, surveys and analyses.



Kenneth H. Helgeson has been appointed to assistant executive in the aviation department of Advertising Regulatory Corp., in Chicago. The agency under direction of Carl H. Helgeson has assembled a staff of experts in aviation advertising, market research, sales promotion and publicity.

Robert H. Moffat has been placed in charge of all domestic, military and foreign representation for the Washington office of Douglas Aircraft Co., Inc. He took over the duties of Irving H. Taylor, assigned to Donald H. Douglas in Washington, who has resigned.

Lowell C. Charles F. McFarland has returned to McGraw-Hill Publishing Co. after four years in the Army, and has been appointed Pacific Coast manager for AVIATION, AVIATION NEWS and AIR TRANSPORT. He was with McGraw-Hill before entering the service.

FINANCIAL

Airlines Seek More New Capital As Prices of Stock Grow Firmer

Eastern and American show greatest efficiency; retooling operations costs and fuel revenue drop, however, may make upward trend only a temporary phase

Airline equities are demonstrating firmer price tendencies after submitting to sharp declines a few months ago. The market will, in due course, determine whether airline shares will resume an upward course or whether the downward trend has merely been temporarily arrested.

The extent of damage to airline market values is indicated in the accompanying table. The airlines are listed on the New York Stock Exchange, Eastern and American have shown the greatest efficiency in converting passenger declines.

Eastern's stock value is currently only 9.9 percent below its all time peak of 135. Good earnings and particularly the pending four-to-one stock split have been noted as reasons for the firm's recovery, whereas stock splits have been announced, the equities concerned have been unusually strong.

Actually, the stockholder receives no added dividend from stock splits or splits, but maintains the same book equity he possessed all the time.

American's recent experience following its five-for-one split is ample evidence of this phenomenon. Despite a public offering of 231,000 shares of the old stock prior to the split, the new shares of American have been very actively traded and have appeared among the first in showing the heaviest volume on the New York Stock Exchange almost daily in recent weeks.

American is back—largely as a result of the speculative market interest. American's common stock is only about 6.8 percent below its best all time high. The low, equivalent to 14.5 on the present shares, was established earlier this year on the old stock. After deficit operations during the first quarter, American was around the break-even point in April and probably will be in the black for May.

The sharpest drop occurred in the market price of TWA, which, with a decline of 39.2 percent, has sustained heaviest losses thus far this year than most of the large carriers. Some analysts believe that it may not be until the second half of the year before TWA recovers the profit cushion. Estimates place the carrier's loss for the first quarter in excess of \$1,000,000.

TWA Faces Defeat—The company will be confronted with the problem of liquidating its deficit, that making it a sale sacrifice that final 1948 results may show a nominal profit and be very disappointing to the \$1,015.55 or \$1.84 per share earned during 1948. However, recent SEC stock transaction reports reveal that the Hughes Tool Co. has again appeared as a buyer of TWA stock and may thus be expected to be a supporting influence for the market price of these shares.

Operating Costs Mount—Rising operating costs have hit the airlines at a time when increased passenger capacity was expected as a compensating advance. However, slow delivery of planes has taken a severe toll on earnings that ultimately would have been present.

The quarterly report of United Air Lines, recently released, highlights the current profits trend in the industry. This transcontinental line showed a net loss of \$352,541.

equal to 30 cents a share on a total of 1,708,847 shares of common stock outstanding. This can be recovered in a year by the first quarter of 1949 of \$1,179,948 or 78 cents per share on a smaller number of common stock issued.

Another interesting aspect of the United report is revealed in the sharp drop of seasonal revenues. This was due to the decline in military operations coupled with the reduced rate of compensation for transporting mail. While this reduced rate was made retroactive to January 1, 1948, it nevertheless resulted in a serious dent in profitable operations in carrying any heavy volume of mail.

Stock New Capital—The air carriers will soon enter the capital markets for substantial new funds. This may be expected to exert an important influence on the level of stock prices.

American is preparing to obtain some \$60 million for its previously announced expansion program. Some guesses place the registration statement at only two to five weeks away. It is believed that stock of the new money will be in convertible debentures and the offer has in new preferred stock, both classes of securities recently authorized when the company split its stock.

TWA is reported to have increased its debt service to \$40 million and has had discussions with the Reconstruction Finance Corp. for additional credits. All this financing, however, will not make the equity but merely subsidize the stock.

United Air Lines may also be expected to sell new capital stock. The trend to open up new lines at the present time. The company's forced overhauls of its previously outstanding preferred stock proved the way for new financing. Banking reports reveal that Charles E. Smith, United's president, has drawn credits amounting to \$1 million to \$2.5 million each.

1948 MARKET RANGE OF LEADING AIRLINE EQUITIES*

Carrier	1948 High	Low	Last	% Decline High-Low
American	141	109	116	17.8
Boeing	103	74	79	25.2
Eastern	135	86	97	33.3
McGraw-Hill	100	74	79	21.0
Norfolk	90	63	68	24.4
Pan American	87	61	66	26.4
TWA	106	68	71	33.9
United	145	109	116	19.3
Western	81	54	59	27.2

*Up to May 19, 1948.



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have been doing it successfully since 1928. It presents charts and examples* to prove the point.

Then the Blueprint quickly goes down to cases about your business. It analyzes current airline advertising . . . gives latest available figures on expenditures . . . shows you where and how major airlines are advertising . . . shows you why much airline advertising falls far short of the kind of selling job that is so readily needed now.

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shippers' minds and practices on air freight. From such facts and figures, plus our 18 years of successful experience on the inside of aviation, it defines the basic course for giving your airline more traffic and more profit per advertising dollar invested.

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TRANSPORT

CAB North Atlantic Rate Veto Poses Problem for Carriers

IATA tariffs scored as board demands lower and economically sound passenger, express fares on U. S.-Europe route.

By CHARLES L. ADAMS

Rejection by CAB of North Atlantic passenger and cargo rates set up by U. S. airlines at the International Air Transport Association's March traffic conference confounds the carriers with the chance of offering new rates individually or waiting until an agreement satisfactory to CAB can be effected.

The latter course is more likely, although it presents the possibility of a deadlock with other nations in the same area, leading to establishment of an open rate. The British and French have indicated a reluctance to cut fares across the Atlantic, and U. S. carriers feel they submitted the lowest possible rates agreeable to foreign airlines at IATA's March meeting.

The Civil Aeronautics Board, however, insists that these tariffs show relationship to reasonably attainable costs of operation.

Editorial Rate Conference—The Board's decision probably will mean continuation of existing rates by Pan American Airways, American Overseas Airlines, and TWA until after IATA's next North Atlantic Traffic Conference June 2, probably in New York. At that time a subcommittee, at work since March, will present a report embodying new and revised operating cost data on trans-Atlantic air service. This subcommittee is being depended upon by CAB to produce statistics which will enable the June conference to propose lower and "economically sound" fares.

In explanation its rejection of IATA's proposed rates is then entirely, CAB called "unconvincing" opposition of AOA and TWA that they completely lacked data last March on which to formulate reasonable estimates of anticipated trans-Atlantic costs. The Board pointed to the carriers' extensive over-ocean operations with four-engine landplane equipment under

Army contract and noted that when applying for routes over the North Atlantic two years ago both AOA and TWA submitted detailed estimates of probable costs.

In 1944, AOA projected an average passenger rate of 7 1/2 cents a mile with DC-4 or DC-8 equipment and TWA a rate of 5 1/4 cents a mile for Constellation service. Fares agreed on by IATA in March averaged more than 10 cents a passenger mile.

PAA Rate Cited—"Particularly serious," the Board said, "is the raising of PAA's rates between the U. S. and the important European gateway points of Shannon, Rome, and London without consideration of any economic data."

IATA, in establishing the rates, accepted as a base the fare of \$375 now in effect between New York and Paris, contrasting therefrom

Damon Predicts Growth

A prediction that trans-Atlantic air travel will reach half a million passengers annually by 1948 was made by Ralph S. Damon, president of American Airlines, before the New York State Aviation Council. New York, he estimated, will produce half that traffic.

With domestic airline operations within New York State having grown from 34 flights in 1930 to more than 300 scheduled flights daily, Damon said the airlines now employ about 15,000 persons at a \$95,000,000 estimated payroll in that state alone.

a graduated series of rates between other points in the U. S. and Europe upon an approximate mileage relationship. Most significant effects of the rate structure that built were retention of the \$375 New York-Paris fare, reduction of New York-London fare from \$315 to \$300, and increase of PAA's New York-Shannon tickets from \$248 to \$218 and its New York-London rate from \$294 to \$275.

CAB had bluntly that selection of the New York-Penn rate for a base was made without any attempt to test its economic soundness.

Need More Initiative—Declaring that there is probably a much greater need for initiative and enterprise in the development of international air cargo business than



NEW BEECH INTERIOR.

The seating arrangement, although not standard, shows one way to accommodate eight passengers in a two-engine Beechcraft Model 18. The new Beech D14-C freighter transport features a seating arrangement with three chairs on each side of the cabin plus a two-seat couch across the rear cabin bulkhead.

in the case of passenger traffic, the Board also rejected air express rates based on the passenger tariffs.

In sum, the Board disapproved North Atlantic Traffic Conference Resolutions 4, 16, 13 and 15, dealing with rates, as being contrary to the public interest, but approved 14 other resolutions proposing broad principles for construction rates and governing general conditions of carriage.

TWA and ADA efforts, commenting on the Board's decision, emphasize that the three agreed upon in March were only of stop-gap nature and express satisfaction over CAB's approval of the overall rate-making machinery. They point out that with this groundwork established the conference next month can concentrate its attention on cost studies with a view to lower and more permanent fares.

Bruff Leases Dallas Plant from Lockheed

Bruff Airways has leased from the city of Dallas the Lockheed Modification Center at Love Field. The agreement, extending 10 years with option privilege on five years additional, will add about 40 acres of hangar, buildings and parking space at Bruff's present base at the field, giving the carrier 65 acres at Dallas municipal airport.

Largest hangar, cafeteria, warehouse, parking area and taxi strips will be available to Army lease.



AIRLINES START USING MOISANT

Six airlines serving New Orleans began operating May 1 from Miami International Airport, although The TWA alone, said to be the largest commercial airport in the world, is 12 miles north of New Orleans. Rates-increase and departure are down daily by Chicago and Southern, Delta, Eastern, Mid-Continent, National and Pan American. The field has five mile-long runway and one 7,660 ft.

State Gives Conditional Backing To TWA on Italian Agreement

Mixed British-American counsel opposed, exclusive route features to be dropped but U. S. line routes policy veto power.

By MERLIN MICKEL

Effective attendance of TWA's agreement with the Italian Government to start an airline within Italy apparently were dissolved last week with announcement by the U. S. State Department that it would give its blessing to the project if exclusive features of the TWA Italian agreement were removed.

TWA found the Department's action ambivalent and expected an Italian decree to form the Italian company, Linee Aeree Italiane, in which TWA would have a 40 percent interest. TWA asserted that steps would be taken in the immediate future to comply with the Department's stipulation that provisions under which the Italian operator would have been given the exclusive route to fly over the specified routes be removed from the agreement.

TWA Agree—TWA has been willing for some time to have the exclusive feature removed, but never has relinquished relinquishing the veto power over policies and management of the new company the 40 percent interest will give it. The change in the contract does not mean this competition will follow

inevitably on the same routes in Italy, Sicily and Sardinia. The Italian Government may decide it is not desirable.

Italy has been holding back its desire on formation of the new company because of British reservations against the exclusive aspect of the TWA agreement. The British had proposed to the State Department that the U. S. Government join it in endeavoring to persuade the Italian Government that it should modify the contract to provide for joint U. S.-British participation with Italian interests in the control of an air service. **U. S. to British**—In a note to the British Ambassador, State Department asserted that TWA did not consider this arrangement practicable and was opposed to such a mixed company. "As the British Government is aware," State said, "this Department is without authority to compel a private U. S. corporation to modify contractual arrangements which it has made leniently."

Should the contract be modified by omission of the exclusivity features, the note asserted, the U. S. Government "would then be justified in advising the Italian Government that the latter should proceed with the implementation of its agreement" with TWA. "Since the contract has been so modified, it would be possible for the Italian Government to enter into such further arrangements as it deemed advisable which might provide for the establishment of a joint British and Italian company to operate air transport services between points in Italy."

Range Restricted—The Department, which has set appropriate restrictions to the American Embassy in Rome, said it was the U. S. view that "the opportunity for participation in the internal civil aviation of an enemy state should not be contracted to any one state or any combination thereof to the exclusion of others. However, the United States Government does not consider that such action necessarily accedes the pressing for foreign interests in a single enterprise."

In a letter to President John F. Kennedy

the Department informed TWA that it could not interfere in the company's behalf with the Italian Government as long as the contract was exclusive, but as event that desire was dissipated was prepared to urge the Italian Government to proceed with implementation of the agreement.

AA Defends Merger With Mid-Continent

CAB examines who opposed an American Airlines-Mid-Continent Airlines merger (AIRLINE NEWS, April 29) have erroneously treated the deal as a cash transaction. American asserted in a recent brief to the Board.

"American is not paying out a nickel of its assets but is merely agreeing to issue an equity interest in its company in exchange for the whole interest in another company," the brief states in denying the "common" contention that an excessive price would be paid for MCA's certificate.

If this kind of transaction is to be judged on the basis of a remuneration of the admittedly inflated market price of an airline's stock with the value of physical assets to be acquired, American declared, the practical consequence is that as long as the markets reflect current public optimism (if not hysteria) about airline stocks there can never be an exchange-of-stocks basis for effecting a carrier combination.

The statement had claimed that American would receive only \$1,999,128 in tangible assets from MCA for \$1,349 shares of AA stock having a market value of over \$15 million dollars.

TCA Seeking Five Gateways to U.S.

Debate of Trans-Canada Air Lines' recent expansion this summer, including plans for opening new routes to the United States and receipt by mid-July of 21 converted DC-3's, were outlined to CAB commissioners recently by William F. English, TCA vice president.

Testifying at a hearing on applications for five gateways into this country, English said his company hopes to be flying Toronto-Chicago, Toronto-Chicago, and Toronto-S. C. Seattle each by July. These routes, together with Boston-Boston and Port Arthur, Ont.-Detroit,



DC-4 VISITS MANHATTAN:

About 70,000 persons have paid 25 cents each to see this American Airlines DC-4, outfitted for show purposes with a cut-away interior with sleeper section made up for day and night use, day plane seating section, galley, air cargo section and pilot and first officer cockpit. Benefits go to the New York Police Athletic League. The plane was flown to New York from Santa Monica, arrived by barge from Long Beach Field in 1949, and landed by tractor from the Hudson River to the display site at West 124th St. and Avenue of the Americas, where it will remain until mid-June.

were reserved for a Canadian carrier under terms of the U. S.-Canadian Civil Air Transport agreement of February, 1945.

Present plans call for three round trips daily between Toronto and Cleveland, four between Toronto and Chicago and three or more between Seattle and Victoria. Opening of the Port Arthur-Detroit route may be delayed until Fall and the Halifax-Boston route until next Spring.

Besides the DC-3's now being converted, TCA has four engine, 40-passenger transports of the DC-4 type under construction at Montreal. This plane, slightly smaller than the standard DC-4, will be purchased and powered with a new engine version of the Pratt & Whitney engine. To handle its additional equipment which will accommodate 11 Lockheed 18's and three DC-3's, TCA is leasing 10 night news trucks.

TCA's present total of 539 seats million probably will be increased by 67 percent this year. The carrier now flies over a million miles monthly, including five trans-Atlantic trips a week from Montreal to Pittsburgh. Sixteen four-transatlantic scheduled daily.

Coal Shortage Boosts Air Space Demand

Rail express embargo will strain airlines, passenger facilities are looked ahead.

The coal shortage, with the resulting curtailment of railroad passenger and freight service, produced a definite bulge in demand for air carrier transportation, but most of the airlines, already booked to capacity, were unable to take advantage of the situation.

A PCA traffic official declared that air express shipments, in particular, were "increasing by leaps and bounds" during the railroad embargo on passenger freight. In New York, airline reservation offices were deluged with calls from travelers seeking transportation, but nearly all were turned down.

TWA told reservation-tickets that all planes flying to Chicago and the West Coast were booked solid for several weeks. Eastern Air Lines reported a two-week backlog of passengers seeking space to Miami, and United Air Lines' waiting lists showed reservations for the West Coast were not available for almost a month.

Airline traffic managers in gen-

Reinstating Local Stops

In common the airlines to resume service to every certificated city on their routes which is not now served, CAB takes cognizance of increasing demand from the public for local air services.

Sixty-five cities, though certificated, are now without service by the scheduled airlines. Most of these service failures are due to wartime restrictions. Others are because of inferior airport conditions. Some, without doubt, reflect a definite lack of interest by the airlines in serving small cities. Unfortunately, this minority attitude has gained strong currency in these unwarmed areas, and as the result of failure of airline public relations there has been a marked cooling in local enthusiasm toward the big carriers. Instead, local loyalty is being built up in favor of small, unaffiliated carriers who are plainly striving to meet local needs.

Whether the net result will be healthy for air transportation or not, since it is hardly likely that even a third of the newcomers can last financially, there is certain to be even a further increase in the number of non-scheduled air carriers between now and Aug. 1. CAB is its recently issued safety regulations for this group permits all such companies operating on that date to continue until final decision is reached on their cases. Nevertheless, this summer will see an unprecedented number of cities and towns in this country receiving some kind of air service. The result even of a few months of such concentrated service on a national scale will create a clamor such as we have never heard before on an aviation matter if most of these smaller airlines are shut down by the federal government.

To date, the efforts of the major airlines in serving smaller cities have not been impressive. But they will have a golden opportunity, in the next six months, through their new route applications, their attitude toward the "small fry" and their willingness to improve local relations. If they snuff it, they can hardly expect any longer to discourage those who are willing to offer local service. CAB's insistence on resuming flights at 65 cities, or considering new carriers who will do so, indicates it is aware of this coming public demand.

Distinguished Service By NASC

This recent annual meeting of the National Aircraft Standards Committee of the Aircraft Industries Association turned the spotlight briefly

on a loyal and capable group of engineers whose wartime accomplishments in speedy aircraft production and in saving millions of dollars of public money have been accorded too little recognition.

This committee of about 30 aircraft industry representatives was created to meet war problems, but by their prodigious effort and patience they have accomplished unprecedented cooperation not only among the various members of the aircraft industry, but between the industry and the armed services, and even between the Army and Navy themselves. Although continuing its work on military production, the committee is turning some of its attention to commercial problems. It is already instrumental in obtaining standardized materials during the present critical shortage period. The committee has performed signal public service, and the industry will need it in the coming critical months of increasing commercial competition when every production short-out and economy will be vital.

A Signal for Lost Pilots

A few weeks ago workers at Meriden Aircraft Corp., a fixed base operator at South Meriden, Conn., listened for almost an hour to a military pilot who was lost in a fog over Long Island Sound. Finally, the pilot sighted two circling SSR's. He flew around them in an effort to attract attention. No luck. Then he sighted an ATC transport, and told Floyd Bennett tower he was following it, although he had no idea where it was going. The ATC pilot did not know his predicament. Finally he found himself over land, and identified his location.

"On a number of occasions, lost pilots have landed at Meriden after circling the practice area until a student decided to come home to his airport," Ernest Markham, of the Connecticut operation, writes. "The confused pilot tagged along. Fortunately, in each case the pilot gained the landing had had enough gas to allow him to follow a student for half an hour."

Mr. Markham thinks some nationally understood "lost" signal should be adopted quickly to permit a pilot to indicate his predicament to another pilot, or to someone on the ground. He suggests something as simple as extending a hat, tie, handkerchief or shirt from the cockpit.

If it will save lives, it should be worth consideration.

ROBERT H. WOOD



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COMPLETE FACILITIES... Major Overhaul of engines and airplanes • on line conversion • magnetic • repair and service of equipment • Inspection • Splendid paint and dope shop

MAINTENANCE... line service • hangars • gas and oil. We have operated "see work alone" as an approved C. A. A. Repair Station (No. 73) since 1929, on our own huge Grand Central Air Terminal. Right now we believe we have the finest service and overhaul facilities in the United States

RECONVERSION... Authorized Douglas Conversion Center • reconversion for airlines, Army, Navy and private owners

PROPELLERS... Maintenance and repair of all makes of propellers • Excellent repair equipment • Approved service on Curtiss Electric Propellers

AGENTS FOR R. F. C. SURPLUS... Try us for surplus engines and airplane parts

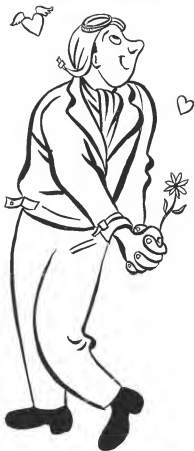
WE HAVE THE EXPERIENCE • THERE IS NO SUBSTITUTE FOR IT



We have a large group of highly skilled personnel, many with 10 to 20 years' experience in Aviation. Many of these men have been with Grand Central Airport Company for more than 10 years.

DRIVE IN • FLY IN • WALK IN • PHONE IN OR WIRE IN





ARE YOU GETTING SWEET ON A CESSNA?

You lucky fellow! It's probably the beginning of a long and beautiful friendship! New places . . . new faces . . . more fun than you've ever had before!

May we make a little suggestion? You'll undoubtedly be flying over Phillips Territory (the great big Middle-West). Whether you set down at a big-city airport or a prairie flying field, ask for Phillips 66 Aviation Products!

They bear the seal of a great company. They were perfected by air-minded men who spend more hours in the air than behind a desk. And, for better carburation and a cleaner motor, we've taken the trouble to manufacture a plentiful supply of *un-leaded* 80 octane gasoline—and to rush it to all the Phillips fields in our territory. Patronize the "66" pump, won't you?

We'll be seeing you!



AVIATION GASOLINE